Arizona's Instrument to Measure Standards (AIMS)

Grade 7
Writing, Reading, and Mathematics

Released Items

January 7, 2008

As part of Superintendent Tom Horne's ongoing efforts to improve the communication of academic expectations, the Arizona Department of Education is releasing AIMS DPA Grades 3 through 8 writing, reading, and mathematics items to the public. This release is intended to provide students, parents, teachers, and the community with specific examples of the types of skills being assessed on the AIMS tests. The release begins with writing, followed by reading and mathematics, similar to the AIMS tests.

Included in this release is a previous writing prompt and directions used in the AIMS assessments. Following the writing prompt section are a reading passage, directions, and the items associated with the passage in the form of a mini-test. This passage and related items are from the 2005 and 2006 AIMS administrations. At the conclusion of the reading section, the individual items are presented again with the correct answers and statistical information about each item.

The final section consists of ten mathematics items from the 2006 and 2007 AIMS administrations in the form of a mini-test. At the conclusion of the mathematics section, the individual items are presented again with the correct answers and statistical information about each item.

The statistical information includes:
   1) item identification number;
   2) correct answer;
   3) response probability (P-Value), which represents the percentage of students who answered the question correctly;
   4) Rasch difficulty, which measures the difficulty of the item on a scale in which -3 indicates a very easy item and +3 indicates an extremely difficult item; and
   5) performance objective that the item aligns to in the 2003 standards.

The items are reproductions of the actual items as they appeared on the AIMS tests. If you have any questions, please contact Frank Brashear, Director of Test & Item Development, at (602) 542-5031.

WRITING

WRITING

Writing

> Your class has joined a pen pal program. You have selected a pen pal who lives in another state.
>
> Write a letter to your new pen pal introducing yourself and telling about your interests.

Your writing should:

- include details about yourself and your interests
- have well-organized ideas
- be written in friendly (personal) letter form

Remember to edit for spelling, grammar, punctuation, and capitalization.

Go On ➡

WRITING

DIRECTIONS: **Use the prewriting and planning space below for notes, lists, webs, outlines, and anything else that might help you plan your writing.**

Prewriting and Planning

DIRECTIONS: **Write your draft on the following lines. Refer to the writing prompt and your prewriting and planning space as you write your draft.**

Draft

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Go On ➡

DIRECTIONS:

Now you are going to revise your draft. Read your draft, then use the questions in the Writer's Checklist as a guide to make your changes. Check each box if you can answer "yes" to that question.

Writer's Checklist

Does my paper have a specific audience and a specific purpose?

Does my paper contain a strong controlling idea?

Does my paper stay on topic?

Does my paper include specific and relevant details, reasons, and examples?

Does my paper have an effective beginning, middle, and end?

Does my paper progress in a logical order, and do my ideas flow smoothly?

Does my paper contain words that make it interesting?

Does my paper contain sentences that are clear and varied in structure?

Does my paper include effective use of paragraphing?

Does my paper include correct grammar/usage, punctuation, capitalization, and spelling?

DIRECTIONS:

For each box you did not check, make a change on your draft. Then write your final version in your Test Book /Answer Document.

STOP

READING

Directions: Read the passage. Then answer Numbers 1 through 9.

LEXILE: 730L

The Secret of a Champ

"Marcus, did you hear about that new guy, Sam?" asked my buddy Jeff as we sauntered home from basketball practice. "He's playing this summer for the Clarkdale Rockets."

"Yeah," I nodded. I tried to sound as unconcerned as if we were discussing yesterday's weather forecast.

"I hear that he was the best three-point shooter at the Clarkdale basketball camp last summer. There were some talented players at that camp too."

"Not talented enough for us," I said as I kicked a pebble down the sidewalk. I was the high scorer on our team, but Sam sounded like serious competition. Our team, the West Canyon Bobcats, was scheduled to play Clarkdale tomorrow night.

"Don't worry," Jeff tried reassuring me. "You always play your best in close games. And everybody expects this to be a close game!"

"Right," I said, relieved that I'd reached the front door to my house. Jeff might have been trying to build up my confidence, but his comments rattled my nerves like an irritating mosquito buzzing around my head.

"See you later," I waved, heading inside to peel off my sweaty clothes. Unfortunately, I couldn't dump Jeff's remarks into the dirty clothes hamper with them. My stomach felt a bit queasy every time I thought about this famous Sam.

How could I compete against someone who attended all those special camps? I didn't have any extra coaching, either—just my nine-year-old brother, Derek, who pestered me to play basketball with him 24/7.

After I finished my supper that evening, Derek cornered me in the kitchen. "C'mon, Marcus," he said, grabbing my shirt like some contestant in a tug of war. "Let's play one-on-one—just one game."

"Fine," I sighed. Derek was a decent player, and I figured it would give me something to concentrate on besides Sam.

Derek and I pedaled our bikes over to the park on the edge of town. A thin, lanky kid was dribbling a ball across the cement court. He wore a baseball cap, and his wheat-colored hair was like straw sticking out the back of it. I tossed the ball to Derek, and we jogged over to the far basket. I let Derek take the ball out, guarding him as he dribbled in and tried to whip past my outstretched arms. He spun around and tossed the ball up with a nice spin, but it banged against the backboard and bounced across the court in front of the straw-haired kid.

"Sorry," I apologized, jogging over to retrieve it.

"No problem," said the lanky kid, staring quietly at me for a moment. "You don't suppose maybe . . ." he started saying, but he stopped and looked down court at the far basket. The way he was chewing on his

Go On ➡

bottom lip, I figured that I should finish the thought for him.

"If the three of us play together, we can use the whole court," I suggested.

"Okay," he quickly agreed. "I'm Sam Tilden. My family has just moved into the house near the corner of the park, so I don't know anybody around here."

I didn't comprehend one word after I heard the name "Sam."

"We're Derek and Marcus," my brother volunteered while I stood there, mute, as if time had come to a sudden halt.

"Marcus? Are you the center for the Bobcats?"

"Yeah," I mumbled. "And you're the center for the Rockets, aren't you?"

Sam nodded, and a grin tugged at one corner of his mouth. "Everybody says that you're unstoppable. One guy on my team said you hired a special coach."

I laughed out loud and pointed with my thumb toward Derek. "You just met my special coach. He drags me out here every afternoon. He would keep me out here until midnight if he could figure out some way to light up the court. The rumor going around West Canyon is that you attend some pretty fancy camp every summer in the city," I ventured cautiously. "I hear you've got a hot three-pointer too."

Sam chuckled, "I practice at any court that is close to home, and I try to sink a thousand buckets a night. That's the only camp I've ever attended."

"Are we going to start this game?" demanded Derek. He darted over and slapped the ball from my hands. "Two-on-one—I'll whip you both!"

"In your dreams," I said, stealing the ball as he tried to dribble around me. I passed it to Sam, and he sent it sailing through the air in a perfect arc.
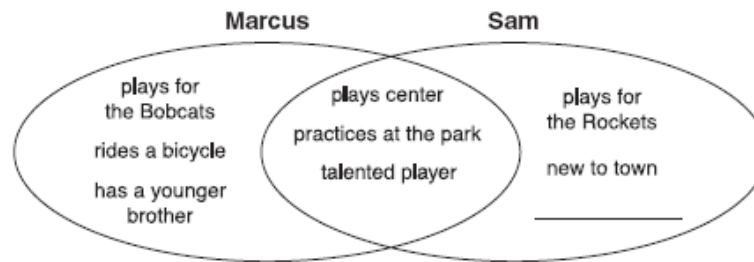
Sam did have a fantastic shot, but suddenly, that didn't seem so overwhelming. I knew his secret—one thousand buckets a night. I'd just have to inform Derek that I wanted to shoot that many too. My personal coach would make sure I remembered.

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1. At the beginning of the passage, why does Marcus worry about Sam?

   A Marcus's team could trade him for Sam.

   B Sam might be a better player than Marcus.

   C Marcus had always lost against Sam's team.

   D Sam's coach was better than Marcus's coach.

Go On ➡

2. Look at the graphic organizer.

                   Marcus   Sam

plays for the Bobcats / rides a bicycle / has a younger brother

plays center / practices at the park / talented player

plays for the Rockets / new to town / _____

Which detail belongs on the blank line?

A has a personal basketball coach

B attended a special basketball camp

C rode a bicycle to the basketball court

D shoots a thousand buckets every night

3. In the first half of the story, what **best** describes Marcus?

A angry

B anxious

C confident

D confused

4. What is one of the themes in this passage?

A Rumors can be misleading.

B Little brothers can compete.

C Moving makes people nervous.

D Camp improves basketball skills.

Go On ➡

5. Read this statement from the story.

> **Unfortunately, I couldn't dump Jeff's remarks into the dirty clothes hamper with them.**

What does the narrator mean by this statement?

A Marcus needed to take a shower.

B Jeff did his laundry at Marcus's house.

C Jeff had been making angry comments.

D Marcus wanted to forget what Jeff said.

6. Why does Marcus agree to go to the park with Derek?

A Marcus wanted to see how well Sam played.

B Marcus needed to think about something else.

C Derek wanted to warm up Marcus for the game.

D Derek needed the extra practice before the game.

7. What is Marcus **most** likely to do the following night?

A practice until midnight

B shoot a thousand buckets

C hire his own private coach

D play one-on-one with Sam

Go On ➡

8. Read this statement from the passage.

> His comments rattled my nerves like an irritating mosquito buzzing around my head.

What does the narrator mean by this statement?

A Jeff was talking too loudly.

B Mosquitoes can be irritating.

C The house was full of insects.

D Jeff's words were bothering Marcus.

9. What does the narrator mean by saying Derek wants to play basketball "24/7"?

A The narrator keeps the score.

B Derek always wants to play basketball.

C Derek wants his brother to defeat Sam.

D The narrator knows the address of the park.

Item	Reading Item Data						
1	Item Number	3299885	Correct Answer	B	P-Value	.78	Equated Rasch Value	-0.6946

2003 Reading Standard Alignment is Strand **2** – Concept **1** – Performance Objective **1**

At the beginning of the passage, why does Marcus worry about Sam?

A Marcus's team could trade him for Sam.

B Sam might be a better player than Marcus.

C Marcus had always lost against Sam's team.

D Sam's coach was better than Marcus's coach.

Reading Item Data

2	Item Number	3299879	Correct Answer	D	P-Value	.70	Equated Rasch Value	-0.0724

2003 Reading Standard Alignment is Strand **1** – Concept **6** – Performance Objective **4**

Look at the graphic organizer.

Which detail belongs on the blank line?

A has a personal basketball coach

B attended a special basketball camp

C rode a bicycle to the basketball court

D shoots a thousand buckets every night

Reading Item Data

3	Item Number	3299886	Correct Answer	B	P-Value	.43	Equated Rasch Value	1.2474

2003 Reading Standard Alignment is Strand **2** – Concept **1** – Performance Objective **3**

In the first half of the story, what **best** describes Marcus?

A angry

B anxious

C confident

D confused

4	Reading Item Data						
	Item Number	3299887	Correct Answer	A	P-Value	.76	Equated Rasch Value	-0.4968

2003 Reading Standard Alignment is Strand **2** – Concept **1** – Performance Objective **2**

What is one of the themes in this passage?

A Rumors can be misleading.

B Little brothers can compete.

C Moving makes people nervous.

D Camp improves basketball skills.

Item	Reading Item Data

5	Reading Item Data						
	Item Number	3299890	Correct Answer	D	P-Value	.77	Equated Rasch Value	-0.5028

2003 Reading Standard Alignment is Strand **2** – Concept **1** – Performance Objective **6**

Read this statement from the story.

> Unfortunately, I couldn't dump Jeff's remarks into the dirty clothes hamper with them.

What does the narrator mean by this statement?

A Marcus needed to take a shower.

B Jeff did his laundry at Marcus's house.

C Jeff had been making angry comments.

D Marcus wanted to forget what Jeff said.

6	Reading Item Data						
	Item Number	3299889	Correct Answer	B	P-Value	.58	Equated Rasch Value	0.4803

2003 Reading Standard Alignment is Strand **1** – Concept **6** – Performance Objective **7**

Why does Marcus agree to go to the park with Derek?

A Marcus wanted to see how well Sam played.

B Marcus needed to think about something else.

C Derek wanted to warm up Marcus for the game.

D Derek needed the extra practice before the game.

7	Reading Item Data							
	Item Number	3299891	Correct Answer	B	P-Value	.66	Equated Rasch Value	0.0601
	2003 Reading Standard Alignment is Strand **1** – Concept **6** – Performance Objective **7**							

What is Marcus **most** likely to do the following night?

A practice until midnight

B shoot a thousand buckets

C hire his own private coach

D play one-on-one with Sam

8	Reading Item Data							
	Item Number	3299884	Correct Answer	D	P-Value	.80	Equated Rasch Value	-0.8593
	2003 Reading Standard Alignment is Strand **1** – Concept **4** – Performance Objective **4**							

Read this statement from the passage.

His comments rattled my nerves like an irritating mosquito buzzing around my head.

What does the narrator mean by this statement?

A Jeff was talking too loudly.

B Mosquitoes can be irritating.

C The house was full of insects.

D Jeff's words were bothering Marcus.

9	Reading Item Data						
	Item Number	3299880	Correct Answer	B	P-Value	.83	Equated Rasch Value	-1.0936
	2003 Reading Standard Alignment is Strand **2** – Concept **1** – Performance Objective **6**						

What does the narrator mean by saying Derek wants to play basketball "24/7"?

A The narrator keeps the score.

B Derek always wants to play basketball.

C Derek wants his brother to defeat Sam.

D The narrator knows the address of the park.

MATHEMATICS

Mathematics

DIRECTIONS: Read each question and choose the best answer.

1. The table below shows the average daily temperature by month and the average monthly temperature increase for several cities in Arizona.

### Average Daily Temperatures by Month (in degrees Fahrenheit)

	Feb	Mar	Apr	May	Avg. Mo. Increase
Benson	64°	70°	80°	82°	+6°
Flagstaff	49°	52°	69°	76°	+9°
Phoenix	75°	81°	89°	96°	+7°
Tucson	68°	74°	83°	86°	+6°

Using the table, predict the average daily temperature in June for Phoenix if it increases exactly by the average shown.

A 98°F

B 103°F

C 110°F

D 113°F

2. Juan is 5 years older than Kathy. If Juan is 17 years old, which equation could be used to find k, Kathy's age?

A $k + 5 = 17$

B $k \bullet 5 = 17$

C $k - 5 = 17$

D $k \div 5 = 17$

Go On ➡️

3. Which ordered pair represents the missing vertex of the rectangle in the grid shown below?
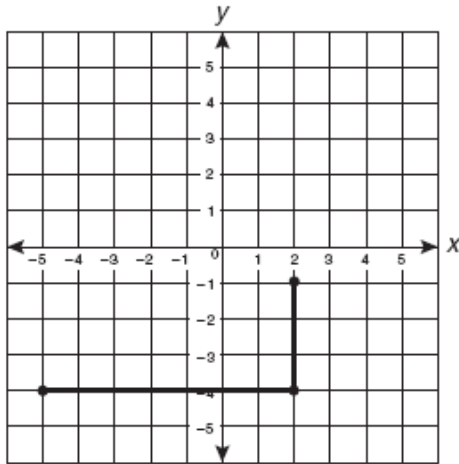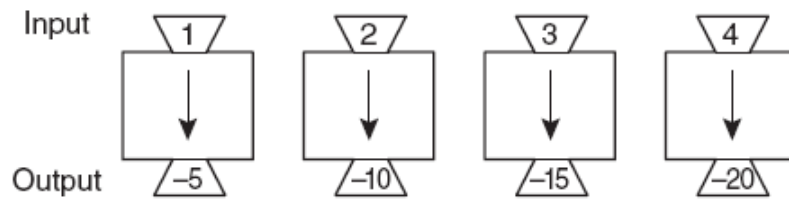

A $(-5, -1)$

B $(-5, 0)$

C $(-1, -5)$

D $(0, -5)$

4. The first two terms of this pattern are 4 and 7. Each term after the second is found by adding the two immediately preceding terms.

4, 7, 11, 18, _?_, _?_, _?_

What are the three missing terms in the pattern above?

A 21, 25, 32

B 21, 28, 35

C 29, 40, 51

D 29, 47, 76

Go On ➡

5. Which of these could be the rule for the input/output machines shown below?

Input	1	2	3	4
Output	−5	−10	−15	−20

A Input times −5 equals output.

B Input minus 20 equals output.

C Input plus −5 equals output.

D Input divided by −5 equals output.

6. The first term in the pattern below is 7. To find each term after the first, Luisa multiplied the previous term by 4 and added 3.

$$7, 31, 127, \ldots$$

If the pattern continues, what are the next three terms?

A 130, 133, 136

B 385, 1,159, 3,481

C 508, 2,032, 8,128

D 511, 2,047, 8,191

Go On ▶

7. In which quadrant on the coordinate plane would an ordered pair be graphed when the first coordinate is positive and the second coordinate is negative (+, −)?
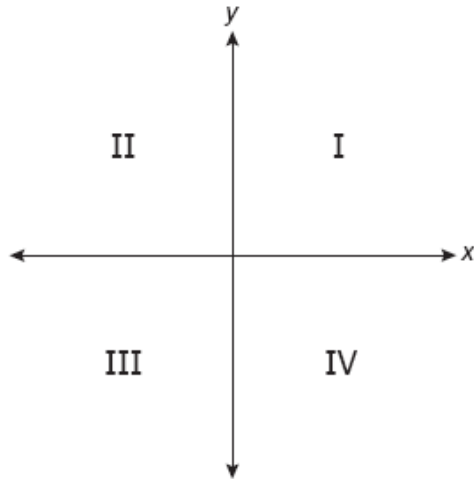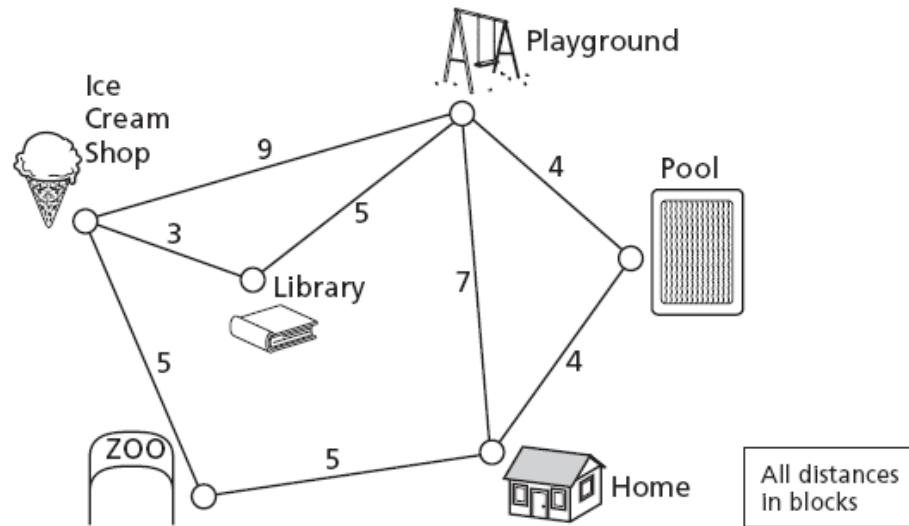

A I

B II

C III

D IV

8. What is the value of this expression when $y = 3$ and $z = 4$?

$$(yz)^2$$

A 14

B 24

C 48

D 144

Go On ➡

9. Marshall wants to visit all the points of interest near his home. Leaving from his home, he will visit the zoo, ice cream shop, playground, library, and pool.

What is the shortest distance he can travel to visit all the sites and return home?

A 21 blocks

B 25 blocks

C 26 blocks

D 27 blocks

Go On

10. Max, Owen, Elise, and Cara went to a school carnival. They each played the ring toss, dart throw, basketball throw, and water shoot. Each student won a different game.

Clues

- Max didn't score any points at the dart throw.
- Elise correctly tossed 2 rings but lost the ring toss.
- Cara won a bear for outscoring everyone at the water shoot.
- Owen scored more points than anyone at the basketball throw.

Clue Sheet

	Dart Throw	Ring Toss	Water Shoot	Basketball Throw
Max				
Owen				
Elise				
Cara				

on the clues above and the clue sheet, which game did Max win?

A dart throw

B ring toss

C water shoot

D basketball throw

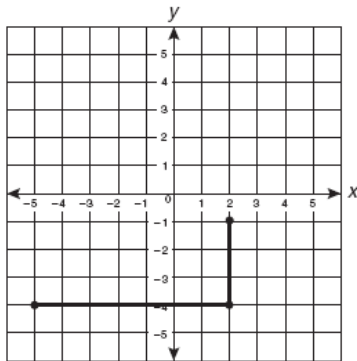| Item	Mathematics Item Data						
1	Item Number	3260961	Correct Answer	B	P-Value	.76	Equated Rasch Value	-0.3697

	2003 Mathematics Standard Alignment is Strand **2** – Concept **1** – Performance Objective **7**		

The table below shows the average daily temperature by month and the average monthly temperature increase for several cities in Arizona.

Average Daily Temperatures by Month (in degrees Fahrenheit)

	Feb	Mar	Apr	May	Avg. Mo. Increase
Benson	64°	70°	80°	82°	+6°
Flagstaff	49°	52°	69°	76°	+9°
Phoenix	75°	81°	89°	96°	+7°
Tucson	68°	74°	83°	86°	+6°

Using the table, predict the average daily temperature in June for Phoenix if it increases exactly by the average shown.

A 98°F

B 103°F

C 110°F

D 113°F

Item							
2	Item Number	3144800	Correct Answer	A	P-Value	.67	Equated Rasch Value	-0.7945

	2003 Mathematics Standard Alignment is Strand **3** – Concept **3** – Performance Objective **4**		

Juan is 5 years older than Kathy. If Juan is 17 years old, which equation could be used to find k, Kathy's age?

A $k + 5 = 17$

B $k \cdot 5 = 17$

C $k - 5 = 17$

D $k \div 5 = 17$

3	Item Number	3301105	Correct Answer	A	P-Value	.67	Equated Rasch Value	-0.3236
	2003 Mathematics Standard Alignment is Strand **4** – Concept **3** – Performance Objective **2**							

Which ordered pair represents the missing vertex of the rectangle in the grid shown below?

A (−5, −1)

B (−5, 0)

C (−1, −5)

D (0, −5)

4	Item Number	3260972	Correct Answer	D	P-Value	.46	Equated Rasch Value	1.2138
	2003 Mathematics Standard Alignment is Strand **3** – Concept **1** – Performance Objective **2**							

The first two terms of this pattern are 4 and 7. Each term after the second is found by adding the two immediately preceding terms.
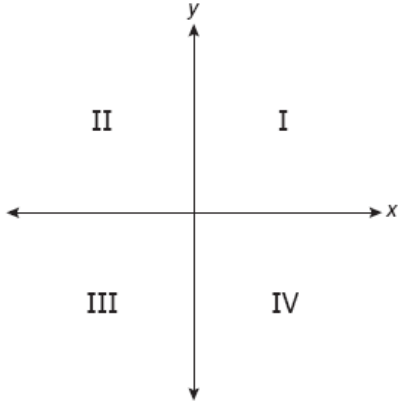
4, 7, 11, 18, _?_, _?_, _?_

What are the three missing terms in the pattern above?

A 21, 25, 32

B 21, 28, 35

C 29, 40, 51

D 29, 47, 76

5	Item Number	3145113	Correct Answer	A	P-Value	.70	Equated Rasch Value	-0.9165		
	2003 Mathematics Standard Alignment is Strand **3** – Concept **2** – Performance Objective **1**									

Which of these could be the rule for the input/output machines shown below?

Input $\quad$ 1 $\quad$ 2 $\quad$ 3 $\quad$ 4

Output $\quad$ −5 $\quad$ −10 $\quad$ −15 $\quad$ −20

A Input times −5 equals output.

B Input minus 20 equals output.

C Input plus −5 equals output.

D Input divided by −5 equals output.

6	Item Number	3260971	Correct Answer	D	P-Value	.55	Equated Rasch Value	0.9884		
	2003 Mathematics Standard Alignment is Strand **3** – Concept **1** – Performance Objective **2**									

The first term in the pattern below is 7. To find each term after the first, Luisa multiplied the previous term by 4 and added 3.

7, 31, 127, . . .

If the pattern continues, what are the next three terms?

A 130, 133, 136

B 385, 1,159, 3,481

**C** 508, 2,032, 8,128

D 511, 2,047, 8,191

7	Item Number	3301119	Correct Answer	D	P-Value	.51	Equated Rasch Value	0.8787

2003 Mathematics Standard Alignment is Strand **4** – Concept **3** – Performance Objective **1**

In which quadrant on the coordinate plane would an ordered pair be graphed when the first coordinate is positive and the second coordinate is negative $(+, -)$?

A   I

B   II

C   III

D   IV

8	Item Number	3260589	Correct Answer	D	P-Value	.51	Equated Rasch Value	0.7802

2003 Mathematics Standard Alignment is Strand **3** – Concept **3** – Performance Objective **1**

What is the value of this expression when $y = 3$ and $z = 4$?

$$(yz)^2$$

A   14

B   24

C   48

D   144

9	Item Number	3301059	Correct Answer	C	P-Value	.59	Equated Rasch Value	0.8984

2003 Mathematics Standard Alignment is Strand **2** – Concept **4** – Performance Objective **1**

Marshall wants to visit all the points of interest near his home. Leaving from his home, he will visit the zoo, ice cream shop, playground, library, and pool.
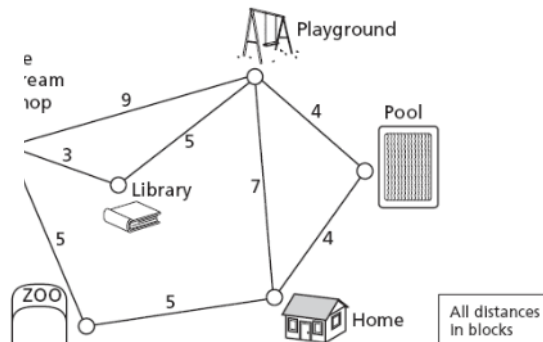
What is the shortest distance he can travel to visit all the sites and return home?

A   21 blocks

B   25 blocks

C   26 blocks

D   27 blocks

10	Item Number	3261020	Correct Answer	B	P-Value	.81	Equated Rasch Value	-0.7803

2003 Mathematics Standard Alignment is Strand **5** – Concept **2** – Performance Objective **1**

Max, Owen, Elise, and Cara went to a school carnival. They each played the ring toss, dart throw, basketball throw, and water shoot. Each student won a different game.

Clues

- Max didn't score any points at the dart throw.
- Elise correctly tossed 2 rings but lost the ring toss.
- Cara won a bear for outscoring everyone at the water shoot.
- Owen scored more points than anyone at the basketball throw.

Clue Sheet

	Dart Throw	Ring Toss	Water Shoot	Basketball Throw
Max				
Owen				
Elise				
Cara				

Based on the clues above and the clue sheet, which game did Max win?

A   dart throw

B   ring toss

C   water shoot

D   basketball throw